The 22nd Annual Meeting of The Korean Society for Psoriasis

PROGRAM BOOK

SEP 1 (Sat), 2018

Seoul Dragon City,
Grand ballroom Baekdu (5F)
Seoul, Korea

Organized by
The Korean Society for Psoriasis
Co-sponsored by
The Korean Dermatological Association

인사말씀

안녕하세요?

9월 1일(토)에 열리는 제22차 대한건선학회 연례 학술대회에 여러분을 초대합니다.

올해도 두 분의 해외연자의 강연을 마련하였습니다. 호주 시드니 대학의 Pablo Fernández-Peñas 교수께서 “Clinical experience with ixekizumab (IL-17A inhibitor)”라는 연제로 건선의 임상 측면에 대한 강연을, 일본 Ehime 대학의 Koji Sayama 교수께서 “IL-22 bcl-3 axis on epidermal keratinocytes in the pathogenesis of psoriasis”라는 연제로 건선의 병인론에 대한 강연을 해주실 예정입니다.

또한 올해 대한건선학회에서는 건선 치료를 담당하게 될 젊은 피부과 의사들을 위하여 새로운 포맷의 건선 교육강연들도 준비하였습니다. 이 세션은 건선의 여러 가지 치료방법에서 가장 중요한 핵심 사항들에 촛점을 맞추어 진행될 예정입니다. 그리고, 오전과 오후에 있는 두 개의 자유연제 세션에서는 올 한해 국내외 여러 건선연구자들이 노력끝에 거둔 연구결과를 발표하고 함께 토의할 예정이오니 많은 참여를 부탁드립니다.

모쪼록, 이번 학술대회가 여러분의 건선 연구와 진료에 많은 도움이 되기를 바라며 학회준비를 위하여 노력해주신 대한건선학회의 상임이사진에게 감사를 드립니다.

2018년 9월

대한건선학회 회장 **송 해 준**

INFORMATION

◆ **등록비** (정회원 연회비 포함)

・사전등록 5만원, 현장등록 6만원

・전공의 및 65세 이상 회원 면제 (*피부과 이외의 타과 30만원)

◆ **연수팽점 :** 5점

◆ **Official Language**

모든 발표자료는 영어로 작성되어야 하며, 연제 발표 시 국내 연자는 한국어를 사용하고 외국인 연자는 영어를 사용하여 발표합니다.

◆ **학회장:** 드래곤시티 그랜드볼룸 백두홀(5층)

서울시 용산구 청파로 20길 95

Tel: +82-2-2223-7000, Fax: +82-2-2223-7778

◆ **발표자들께 알리는 말씀**

・발표파일은 MS사의 파워포인트(버젼 2000이상)로 만들어 주시기 바랍니다.

・모든 연자는 발표 1시간 전까지 USB에 저장하여 슬라이드 접수처에 제출해 주시기 바랍니다.

・발표자가 지참한 노트북은 발표 시 직접 연결하여 사용할 수 없습니다.

PROGRAM

09:30-09:50 Registration

09:50-10:00 Opening Address — **SONG Hae Jun**, President of KSP
Congratulatory Message — **SEO Seong Jun,** President of KDA

10:00-11:00 Free Communication I — **Chairs: KIM Kwang-Joong** *(Hallym Univ.),* **LEE Seung Chul** *(Chonnam Univ.),* **SEO Seong Jun** *(Chung-Ang Univ.)*

11:00-11:50 Special Lecture I

Chair: CHOI Jee-Ho *(Ulsan Univ.)*

11:50-12:00 Commemorative Photo

12:00-13:30 Lunch & Board Meeting

13:30-14:30 Free Communication II

Chair: KIM Nack-In *(Kim Nack-In Dermatology Clinic.),* **KIM Myung Nam** *(Chung-Ang Univ.),* **LEE Min Geol** *(Yonsei Univ.)*

14:30-15:20 Special Lecture II

Chair: SONG Hae Jun *(Korea Univ.)*

15:20-15:40 Coffee Break

15:40-17:00 Lessons from the KSP

Chair: YOUN Jai Il *(Inshine Dermatology Clinic),* **KIM Tae Yoon** *(Catholic Univ.)*

Stepwise training of PsO management for beginners: from topical to biologics

17:00-18:00 Closing

Free Communication I

FC 1-1

Clinical Features, Etiologic Factors, Treatment, and Comorbidities of Palmoplantar Pustulosis: a Retrospective Single-center Study

LEE Jae Won, OH Jongwook, KIM Tae-Gyun, LEE Min-Geol

Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine

Background: Palmoplantar pustulosis (PPP) is a chronic relapsing inflammatory dermatosis showing pustular eruption localized to palm and sole. Data regarding general characteristics and comorbidities of PPP are scarce.

Objectives: To analyze the clinical features, etiologic factors, treatment, and comorbidities of PPP.

Methods: We conducted a retrospective review of 262 patients with PPP at Severance hospital between January 1, 2006, and December 31, 2017.

Results: Of 262 patients with PPP identified, 150 (57.3%) were female, and the mean age at onset was 46.3 years. More than a half of patients (n=167, 63.7%) were current or former smokers. At diagnosis, 91 patients (35.1%) showed nail involvement and 39 (14.9%) showed arthralgia. Comorbid conditions included hypertension in 55 patients (20.9%), type 2 diabetes mellitus in 46 (17.5%), and thyroid disease in 32 (12.2%). In all, 253 patients (96%) received topical corticosteroids, 45 (17.1%) received phototherapy, and 140 (53.4%) received systemic agents. In multivariate logistic regression analysis, palmoplantar distribution, nail involvement, and smoking history were statistically significant predicting factors for the use of systemic treatment. Nail involvement, joint symptom, smoking history, and thyroid disease were significant predicting factors for more recalcitrant disease represented as cases treated with more than 2 systemic therapies.

Conclusion: More than half of the patients in this study had a history of smoking, which was found to be a significant predicting determinant for more refractory course of the disease. Patients with PPP frequently presented some comorbid conditions including hypertension, type 2 diabetes mellitus, and thyroid diseases. Given this associated factors and comorbidities, thorough history taking and proper patient-education are necessary for the comprehensive care of patients with PPP.

FC 1-2

Comorbidities in Patients with Psoriasis in Korea: A Population-based Prospective Cohort Study

LEE Jae Won[1], JUNG Keum Ji[2], KIM Tae-Gyun[1], Oh Jongwook[1], JEE Sun Ha[2], LEE Min-Geol[1]

[1]Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine, [2]Department of Epidemiology and Health Promotion, Institute for Health Promotion, Graduate School of Public Health, Yonsei University

Background: Psoriasis is a chronic inflammatory dermatosis that is increasingly being recognized as a systemic inflammatory disorder. Recently reported studies in various populations and settings support associations between psoriasis and cardiovascular diseases, infection, gastrointestinal diseases, malignancy, and psychological disorders. However, due to the lack of large comprehensive data, the association among Asians has yet to be established.

Objectives: To analyze the comorbidities in patients with psoriasis in Korea.

Methods: The current study used data from National Health Insurance System to investigate the relative risk of depression, inflammatory bowel disease (IBD), and malignancies in patients with psoriasis compared to subjects without psoriasis in Korean population. This prospective cohort study included 1,733,620 Koreans with 4 years of baseline period and 15 years of follow-up period. The severity of psoriasis was categorized by the use of systemic agents for the treatment.

Results: The risk of depression was higher in patients with psoriasis with the adjusted hazard ratio (aHR) of 1.12 compared to controls, which was mainly driven by female patients, whereas that of ulcerative colitis was higher only in male patients with psoriasis (aHR=1.32). Crohn's disease showed higher risk in patient with moderate-to-severe psoriasis (aHR=1.68). The overall risk of malignancy was higher in patients with psoriasis compared to controls (aHR=1.08). Specifically, gastric cancer showed higher risk in patients with psoriasis (aHR=1.31). The risk of non-Hodgkin lymphoma and Non-melanoma skin cancer were increased in patients with moderate-to-severe psoriasis (aHR=2.86 and aHR=3.93, respectively).

Conclusion: The positive association of psoriasis with depression, IBD, and malignancy was present in our cohort of patients with psoriasis in Korea. As comorbidities of psoriasis continue to emerge, perception of specific diseases with significant relations is essential to provide comprehensive medical care for patients with psoriasis.

FC 1-3

Profilin-1 As a Possible Biomarker in Psoriasis

JEONG In Jae[1], MOK Bo Ram[2], BAEK Seung Hwa[2], LEE Hee Jung[1], YOON Moon Soo[1], KIM Tae-Aug[2], KIM Dong Hyun[1]

[1]Department of Dermatology, Bundang CHA Medical Center, CHA University School of Medicine,
[2]Department of Biochemistry, CHA University School of Medicine

Background: Profilin-1 (PFN-1), a ubiquitously expressed actin-binding protein, has diverse role in cellular processes like cell motility, migration and proliferation. Several proteomic studies reported increased PFN-1 in the plasma of psoriasis patients. However, there is limited research on the potential association between PFN-1 and psoriasis.

Methods: The expression of PFN-1 was evaluated by the immunohistochemical staining for PFN-1 in psoriatic skin lesions, non-lesional skin and normal skin. To investigate the association between PFN-1 and biomarkers induced by IL-17A in psoriasis, IL-17A-induced psoriasis 2D model was used to compare the expression of known psoriatic biomarkers with PFN-1 by qPCR and western blotting.

Results: The expression of PFN-1 was significantly increased in psoriatic skin lesions compared to normal skin. S100A4, a T-lymphocyte and Langerhans cell marker, was co-expressed with PFN-1 in lesional skin, which indicates that PFN-1 is associated with T-lymphocytes. Additionally, the expression of PFN-1 was also increased in the IL-17A-induced HaCaT cells. The gene and protein expression patterns were coincided with other biomarkers induced by IL-17A in psoriasis.

Conclusion: This preliminary study suggests that PFN-1 may serve as a potential biomarker for the diagnosis and monitoring of psoriasis although further studies are needed.

FC 1-4

Risk of Acute Infections in Patients with Psoriasis: A Nationwide Population-based Cohort Study

KIM Bo Ri[1], KANG Danbee[2], CHO Juhee[2], YOUN Sang Woong[1]

[1]Department of Dermatology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, [2]Center for Clinical Epidemiology, Samsung Medical Center, Sungkyunkwan University School of Medicine

It is important to quantify and understand the burden of acute infections associated with psoriasis in daily medical care for patients. However, no studies have investigated comprehensive list of acute infections which often only observed at psoriasis outpatient clinics. In this study, we evaluated the risk of acute infections of patients with psoriasis compared to controls without psoriasis by quantifying overall clinic visits including outpatient, inpatient, and emergency room visits due to acute infections. We also sought to establish whether the risk of acute infections is affected by immunomodulatory or immunosuppressive systemic antipsoriatic therapies. We conducted a cohort study using nationally representative sample followed for up to 10 years (January 1, 2003 to December 31, 2013). Men and women 20 to 70 years of age with no history of psoriasis at baseline were included. Main exposure was incident psoriasis (time-varying exposure). Main outcome was the number of clinic visits due to acute infectious diseases. Among 675,815 participants, 18,160 participants developed psoriasis. On average, patients with psoriasis had 2.24 overall clinic visits per year for acute infectious diseases, and they were more likely to have acute infections than patients without psoriasis (adjusted rate ratio (RR) = 1.86, 95% confidence interval (CI) 1.81, 1.91). Compared to people without psoriasis, the fully-adjusted RR (95% CI) for overall acute infections in patient with psoriasis but without systemic treatment and in patients with psoriasis with systemic treatment were 1.88 (95% CI, 1.82, 1.93) and 1.77 (95% CI, 1.64, 1.91) respectively. In conclusion, this nationwide population-based study demonstrates that patients with psoriasis have a higher risk of acute infections, especially skin and soft-tissue infections and sexually transmitted infections, in overall clinics, including outpatients as well as emergency rooms and inpatients. It is independent of immunomodulatory systemic antipsoriatic treatment, and rather successful systemic antipsoriatic treatment may alleviate the risk of acute infections to some extent.

FC 1-5

Economic Factors As Major Determinants of Ustekinumab Drug Survival of Patients with Chronic Plaque Psoriasis in Korea

CHOI Chong Won, YANG Seungkul, JO Gwanghyun, KIM Bo Ri, YOUN Sang Woong

Department of Dermatology, Seoul National University College of Medicine, Seoul National University Bundang Hospital

Drug survival, defined as the time until discontinuation, is a parameter reflecting real-world therapeutic effectiveness. Few studies have examined the influence of economic factors on the drug survival of biologic agents for psoriasis, particularly in Asian countries. The objective of this study was to determine the drug survival for ustekinumab in real-life settings and investigate the factors affecting drug survival for psoriasis patients in Korea. We evaluated 98 psoriasis patients who were treated with ustekinumab at a single center. We analyzed the efficacy and drug survival of ustekinumab. Cox proportional hazard analysis and competing risk regression analysis were performed to reveal the factors affecting the drug survival of ustekinumab. The overall mean drug survival was 1596 days (95% confidence interval (CI): 904–2288). Among the 39 cessations of ustekinumab treatment, 9 (23.1%) patients discontinued treatment after experiencing satisfactory results. Multivariate Cox proportional hazard analysis revealed that paying on patients' own expense was the major predictor for the discontinuation of ustekinumab (hazard ratio (HR): 9.696; 95% CI: 4.088–22.998). Competing risk regression analysis modeling of discontinuation because of factors other than satisfaction of an event also revealed that ustekinumab treatment at the patient's expense (HR: 4.138; 95% CI: 1.684–10.168) was a predictor of discontinuation rather than satisfaction. The results of our study revealed that the cost of biologics treatment affects the drug survival of ustekinumab and suggested that economic factors affect the drug survival of ustekinumab treatment in Korea.

FC 1-6

Validity of Diagnostic Codes for Identification of Psoriasis Patients in Korea

HAM Seung Pil, OH Jae Hong, PARK Hee Jae, KIM Jong Uk[1], KIM Ho Young[2], JUNG So Young[3], CHOI Sun Young[4], SEOL Jung Eun[1], KIM Hyojin[1], KIM Myoung Shin[2], LEE Un Ha[2], CHOI Mira, PARK Hai-Jin

Department of Dermatology, Ilsan Paik hospital, College of Medicine, Inje University, [1]Department of Dermatology, Busan Paik Hospital, College of Medicine, Inje University, [2]Department of Dermatology, Sanggye Paik Hospital, College of Medicine, Inje University, [3]Department of Dermatology, Haeundae Paik Hospital, College of Medicine, Inje University, [4]Department of Dermatology, Seoul Paik Hospital, College of Medicine, Inje University

Background: Recently, nationwide medical research of psoriasis using National Health Insurance Service database is increasing. However, identification of psoriasis using diagnostic codes alone can lead to misclassification. Accuracy of the diagnostic codes and concordance with electronic medical records should be validated to identify psoriasis patient.

Objective: To validate the diagnostic codes of psoriasis (ICD-10 L40) and to find algorithm for identification of psoriasis.

Methods: We collected medical records of patients who got their first diagnostic codes of psoriasis during 5 years (2012-2016) from five hospitals. 15 percent of patients were randomly selected at each hospital. Patients were classified as psoriasis, not psoriasis, and questionable for final diagnosis. We validated several algorithms to identify psoriasis.

Results: Total 538 cases were reviewed and classified as psoriasis (n=371), not psoriasis (n=165), and questionable (n=11). The most accurate algorithm was including patients with main diagnostic codes of psoriasis and prescription of vitamin D derivatives. Positive predictive value was 96.5% (95% CI, 94.6~98.5%) which were significantly higher than including patients with psoriasis diagnostic codes alone (p=0.002, 96.5% vs. 91.0%). Sensitivity was 90.8% (95% CI, 87.8~93.7%) and specificity was 92.4% (95% CI, 88.3~96.6%).

Conclusion: Our study demonstrates validated algorithm to identify psoriasis which is useful for the nationwide population based study for psoriasis.

FC 1-7

Judicial Precedents Cases Related to Psoriasis in Republic of Korea

LEE Hanjae[1], SHIN Su Hwan[2,3], LEE Won[4,5], KIM So Yoon[4,5], CHO Soo Ick[1], JO Seong Jin[1]

[1]Department of Dermatology, Seoul National University College of Medicine, [2]Doctoral Programin Medical Law and Ethics, Yonsei University, [3]Blue Urology Clinic, [4]Department of Medical Law and Bioethics, Yonsei University College of Medicine, [5]Asian Institute for Bioethics and Health Law, Yonsei University

Background: The prevalence of medical disputes is increasing in Korea and yet it is still insufficiently discussed in the field of dermatology.

Objectives: This study was aimed to find out and analyze the medical litigation related to psoriasis.

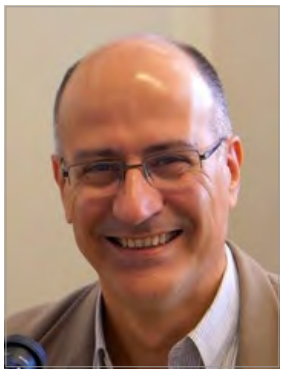
Methods: Psoriasis-related legal judgments were searched by The Supreme Court of Korea's Written Judgment Management System based on the keywords for psoriasis. The search system contained sentenced cases at the Lower Courts, the Appellate Courts, and the Supreme Court from 1997 to 2017 in Korea.

Results: Four cases were confirmed as the litigated cases of psoriasis. Each case of psoriasis was issued by different medication and complication; systemic steroid and avascular necrosis of the femoral head, acitretin and pregnancy, antifungal agent and drug eruption, and methotrexate and pneumonia. Only one case related to pregnancy was sentenced in favor of the plaintiff, while other 3 cases were dismissed. The awarded amount was 10,000,000 Korean Won.

Conclusion: Several medico-legal disputes regarding the treatment of psoriasis occurred. While cases in which the causal relationship was unclear were dismissed, the proximate causal relationship between the violation of the duty of informed consent and the undesired consequence was admitted in the case of elective abortion due to acitretin. In conclusion, sufficient informed consent and careful medical examination before psoriasis treatment are necessary to prevent medic-legal disputes.

Special Lecture I

CURRICULUM VITAE



Prof. Pablo Fernández-Peñas
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Medical Education:

1995-2000	PhD (Medicine), Universidad Autónoma, Madrid, Spain. Extraordinary prize of the School of Medicine, Universidad Autónoma.
1991-1994	Residency in Dermatology, Hospital Universitario de la Princesa, Madrid, Spain.
1983-1989	Doctor of Medicine, Universidad Autónoma, Madrid, Spain.

Postgraduate Training:

2017	Good Clinical Practice. ARCS Australia (8 hours)
2007-2008	Clinical Leadership Modular Program. Clinical Excellence Commission. NSW Health. New South Wales Government (150 hours)
2005-2006	University Expert on Advanced Methods in Applied Statistics. Universidad Nacional de Educación a Distancia, Spain (350 hours).
2005	Research Fellow, Dermatology, Harvard Medical School, Boston, USA (6 months).
2005	Course in the Protection of Human Research Subjects. Dana-Farber/Harvard Cancer Center, Boston, USA (10 hours).

Professional Status:

2018-present	Professor of Dermatology. Sydney Medical School, The University of Sydney, Australia
2018-present	Academic Leader (HDR), Sydney Medical School, The University of Sydney, Australia
2017-present	Director, Centre for Translational Skin Research, Sydney, Australia
2009-present	Head, Department of Dermatology, Westmead Hospital, NSW, Australia
2008-present	Head of Research, Skin and Cancer Foundation Australia, NSW, Australia
2007-present	Senior Medical Practitioner (Academic), Westmead Hospital, NSW, Australia

SL-1

UNCOVER Ixekizumab, A High Binding Affinity IL-17A Inhibitor

FERNÁNDEZ-PEÑAS Pablo

Department of Dermatology, Westmead Hospital, Sydney Medical School, The University of Sydney

IL-17A is a cytokine that directly activates keratinocytes and stimulates the production of chemokines, cytokines and antimicrobial peptides, which contribute to the clinical manifestations of psoriasis. Blocking IL-17A represents the most recent approach to control this disease effectively. Ixekizumab (Taltz®) is a humanized anti-interleukin-17A IgG4 monoclonal antibody with high binding affinity.

In IXORA-S trail, Ixekizumab (n = 99, 72.8%) was superior to Ustekinumab (n = 70, 42.2%) in PASI 90 response ($P < 0.001$). Response rates for PASI 75, PASI 100 and sPGA (0,1) were also significantly higher for Ixekizumab than for Ustekinumab ($P < 0.001$). At week 24, IXE treated patients had significantly higher response rates than UST-treated patients for PASI, sPGA and DLQI (unadjusted $P < 0.05$).

In the phase 3 UNCOVER -2 trials, at 12 weeks, the patients had better responses to Ixekizumab than to Etanercept. In Ixekizumab 80mg every 2weeks group (n=351), 90%, 71% and 40% had PASI75, PASI90 and PASI100 response respectively. Clinical responses to Ixekizumab were quickly seen as early as week 1. Additionally, Ixekizumab provided higher efficacy regardless of previous biologic usage.

In a pooled analysis of UNCOVER-2 and -3 (n = 2562), Ixekizumab (either regimen) and Etanercept groups did not differ significantly with respect to the incidence of TEAEs (57.6 vs. 54.0%), serious adverse events (1.9 vs. 1.9%), and discontinuations because of adverse events (2.0 vs. 1.2%) during the induction treatment period. Ixekizumab was generally well tolerated compared to Etanercept during up to 60 weeks of therapy.

Currently available data indicate that Ixekizumab is an effective and generally well tolerated treatment option for patients with moderate to severe plaque psoriasis.

Free Communication Ⅱ

FC 2-1

The Neutrophil Activates Keratinocyte via IL-17

MIZUTANI Kento, MATSUSHIMA Yoshiaki, OKADA Kari, UMAOKA Ai, SHIRAKAMI Eri, YAMANAKA Keiichi

Department of Dermatology, Mie University, Graduate School of Medicine, Tsu, Mie, Japan

In psoriasis, the blockade of IL-17 by specific monoclonal antibodies shows dramatic improvement of the skin symptoms and partially joint symptoms. However, the main source of IL-17 in psoriasis is still obscure. In addition to Th17 cells, ILC3, and mast cells, neutrophil had been regarded as a major producer of IL-17. However, from our recent investigation, IL-17 mRNA expression was undetectable in neutrophils even under the stimulation. Then, the question arose that neutrophil is functional in psoriasis or not. We here investigated the role of neutrophil in IL-17 mediated inflammatory skin disorders. Neutrophil from the venous blood of the healthy volunteers was cultured with various concentrations of IL-17, and then neutrophil was co-cultured with keratinocyte cell line, HaCat cell for 48 hours. mRNA expression for cytokeratin and S100A expression was measured.

Up-regulation of the proliferation related keratins: K16 and K17, and down-regulation of K10 are characteristic in psoriatic epidermis. In the present study, HaCaT cell treated with neutrophil without IL-17 showed the elevation of K16 or K17 mRNA levels, and no changes in K10 mRNA expression, suggesting neutrophil itself induces the activation of keratinocytes. Elevation of S100A7, -8 and -9 mRNA levels are also characteristic in psoriasis epidermis. S100A7, -8 and -9 mRNA levels in HaCat cell harvested with IL-17-co-cultured neutrophil were significantly elevated concentration dependently. S100A from keratinocytes has important role in neutrophil migration into the inflammatory lesions. Neutrophil itself activates keratinocyte and IL-17-bearing neutrophil increases neutrophil recruitment into the lesional epidermis, causing a positive IL-17 paracrine network in psoriasis.

FC 2-2

The Cases of Psoriatic Arthritis with Spondyloarthritis; How Is the Prognosis?

UMAOKA Ai, AKEDA Tomok, MIZUTANI Kento, MATSUSHIMA Yoshiaki, OKADA Karin, SHIRAKAMI Eri, YAMANAKA Keiichi

Department of Dermatology, Mie University, Graduate School of Medicine, Tsu, Mie, Japan

In our department, more than 40% of new psoriasis patients show joint involvement (PsA). In Japan, the TNF-α inhibitors are the first line treatment for PsA, and IL-17 inhibitors or ustekinumab are the second line treatment. Methotrexate (MTX) and salazosulfapyridine can be supplemented in some cases. The patient activities are usually monitored by clinical findings (pain, tenderness, swelling), CRP, , and patient (VAS).We here present recent cases of PsA with spondyloarthritis. At the first visit, most cases already showed fixed or completed spondyloarthritis. We have treated those patients with TNF-α inhibitors or IL-17 inhibitors to stop further exacerbation. The outcome after several years treatments will be presented.

FC 2-3

A Case of Psoriasis Associated with Ichthyosis Treated with Ustekinumab

BAE Joo-Yoon, JANG Dong-Hyek, LEE Jae-In,
KIM Hong-Lim, JUNG Hye-Jung, PARK Mi-Youn, AHN Ji-Young

Department of Dermatology, National Medical Center

X-linked recessive ichthyosis (XLRI) is an inherited disorder of keratinization due to steroid sulfatase deficiency, occurs only in men. There is no case report for the coexisting of XLRI and psoriasis, and association of two diseases is unknown.

A 50-year-old man was being treated for psoriasis and XLRI. Onset of psoriasis was 30 years ago, and XLRI was reported to occur immediately after birth. The patient's uncle on mother's side al so had XLRI. The patient had no family history of psoriasis and other medical history. He had psoriasis lesions of scaly erythematous plaque and ichthyosis lesions of fine scale patches on the whole body. Psoriasis and ichthyosis were treated with conventional treatment, but they did not show effect and wax and wane. Ustekinumab was started to treat psoriasis two years ago. With the start of Ustekinumab, psoriasis as well as ichthyosis lesions improved. When the patient was scheduled to take the fifth injection, he visited the clinic one month later than scheduled date, both the psoriasis and ichthyosis lesions were worsened again. Restart of Ustekinumab treatment improved both disease lesions.

Here in, we report a case of psoriasis associated with XLRI as an interesting case of improvement of both diseases in Ustekinumab treatment.

FC 2-4

A Case of Psoriasis Vulgaris Developed in an Epidermolysis Bullosa Simplex Patient

LEE Jae-In, JANG Dong-Hyek, BAE Joo-Yoon, KIM Hong-Lim, PARK Mi-Youn, AHN Ji-Young, JUNG Hye-Jung

Department of Dermatology, National Medical Center

Epidermolysis bullosa (EB) refers to a heterogeneous group of genetic skin diseases characterized by blistering triggered by minor trauma. Epidermolysis bullosa simplex (EBS) is the most common type of EB and shows a cleave plane at the level of basal keratinocytes. EBS is mostly inherited in an autosomal dominant fashion and approximately 75 % of EBS cases are caused by mutations in the KRT5 and KRT 14 genes. Psoriasis is a chronic inflammatory skin disease and the Koebner phenomenon may occur.

A 48-year-old man visited our outpatient clinic presenting with erythematous plaques with silvery scale on his trunk, arms and legs. The lesions were aggravated 2 months ago. And he was diagnosed epidermolysis bullosa 28 years ago and presents a blister on his foot. His mother, siblings and cousins also had a bullous disease. Skin biopsy assessment taken from the scaly plaque showed a parakeratosis, acanthosis, rete ridge elongation, subepidermal cleft in the epidermis and perivascular lymphocytic infiltration and neutrophil infiltration in the papillary dermis. And another skin biopsy specimen obtained from a blister revealed a subepidermal blister with infiltration of inflammatory cells composed largely of lymphocytes and eosinophils. During hospitalization, oral cyclosporine and topical calcipotriol with betamethasone dipropionate were administered. The psoriatic plaques were improved but because of follow up loss his legs was aggravated on the second hospitalization. He was treated with NB-UVB therapy and topical medication and the psoriatic plaques were improved.

We report a rare case of psoriasis vulgaris occurred in an epidermolysis bullosa simplex patient.

FC 2-5

Comparison of NAPSI and N-NAIL for Evaluation of Fingernail Psoriasis in Patients with Moderate-to-severe Plaque Psoriasis Treated Using Ustekinumab

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Nail psoriasis is a common condition accompanying psoriasis which impacts significant physical and psychological impairment of the patients. Several evaluation methods for nail psoriasis have been developed including Nail Psoriasis Severity Index (NAPSI) and Nijmegen-Nail psoriasis Activity Index tooL (N-NAIL). To date, studies on nail psoriasis treatment focused on overall NAPSI score but did not evaluate the improvement of specific nail psoriasis features. Therefore, we sought to determine the psoriatic nail features which respond to treatment more effectively by evaluating NAPSI and N-NAIL improvement of nail psoriasis. We prospectively analyzed thirty patients with moderate-to-severe plaque psoriasis treated with ustekinumab for 52 weeks. A single investigator evaluated the condition using the NAPSI and the N-NAIL with serial fingernail photographs. Of the 30 patients, 13 (43.3%) had fingernail psoriasis present at baseline. Mean NAPSI scores improved from 9.46 ± 8.7 at baseline to 6.00 ± 5.2 at week 52, but the improvement was not statistically significant ($p = .09$). Mean N-NAIL scores significantly improved from 5.46 ± 5.1 at baseline to 3.92 ± 3.7 at week 52 ($p = .04$). Of the psoriatic nail features, only the splinter hemorrhages significantly improved at week 52 compared to baseline value. In conclusion, when comparing the mean scores between week 0 and 52, the N-NAIL score better reflected a significant improvement of nail psoriasis than the NAPSI, and ustekinumab treatment resulted in a more rapid and effective improvement of splinter hemorrhages.

FC 2-6

Dose-dependent Efficacy of Methotrexate in Psoriasis: A Single-center, Retrospective Study

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Psoriasis is a chronic relapsing inflammatory skin disease affecting approximately 1-3% of the general population. Methotrexate (MTX) was approved as one of systemic drugs to treat psoriasis by the US Food and Drug Administration in 2009, but no consensus is achieved on the optimal dose and treatment regimen of MTX. Herein we sought to evaluate the efficacy of MTX in psoriasis in relation with MTX-doses.

This study included 839 patients, who had visited Chonnam National University Hospital from 2013 to 2017. The age of onset, duration, types of psoriasis, past history, family history, and treatment modalities were evaluated. 598 patients (71%) were treated by systemic drugs, such as retinoic acid, cyclosporine, MTX, and steroid. We analyzed the efficacy of MTX as well as their initial and cumulative doses, treatment duration, baseline PASI score, and adverse reactions. Among MTX-treated patients (n=230), 67.7% showed to be good-to-excellent to MTX, but 12.3% were aggravated by MTX. In MTX-treated patients, the non-responder group (n=82) to lower doses of MTX (2.5mg-15mg) were treated with higher MTX dose (22.5mg/week). Among them, 78% of patients (n=64) showed good clinical response to the higher dose of MTX. In conclusion, MTX is found to be an effective drug for Korean psoriasis patients in a dose-dependent manner.

FC 2-7

Psoriasis Increases the Risk of Concurrent Inflammatory Bowel Disease: A Population-based Nationwide Study in Korea

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Background: The epidemiology of the association between psoriasis and inflammatory bowel disease (IBD) is poorly defined and remains controversial.

Objectives: To evaluate prevalence of IBD in patients with psoriasis compared with the general population.

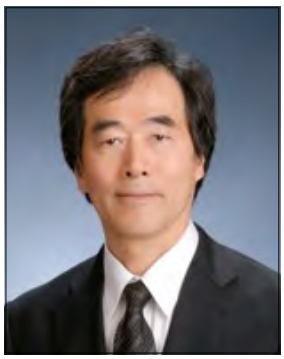
Methods: We searched the nationwide health claims database between 2011 and 2015 and evaluated prevalence of IBD, including Crohn's disease (CD) and ulcerative colitis (UC).

Results: Prevalence of IBD, CD, and UC in patients with psoriasis vs the general population in 2011 were 0.16%, 0.05%, and 0.12% vs 0.08%, 0.03%, and 0.06%, respectively, which increased significantly with time between 2011 and 2015. Patients with psoriasis consistently revealed higher standardized prevalence (age and sex adjusted) of IBD, CD, and UC compared with the general population. Subgroup analysis revealed the highest risk of prevalent IBD in patients younger than 19 years (crude odds ratio [OR] 5.33, 95% confidence interval [CI] 3.74-7.59). Severe psoriasis demonstrated higher odds of IBD (OR 2.96, 95% CI 2.54-3.45) than mild psoriasis (OR 1.68, 95% CI 1.51-1.88).

Conclusion: Psoriasis patients revealed higher risk of IBD. In particular, young patients and those with severe psoriasis may require closer monitoring and comprehensive management.

Special Lecture Ⅱ

CURRICULUM VITAE



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SL-2

IL-22-Bcl-3 Axis in The Pathogenesis of Psoriasis

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Psoriasis is characterized by hyper proliferation of keratinocytes and inflammation. Epidermal keratinocytes are acting not only as physical barrier but also as immune cells in the skin. In this talk, the role Bcl-3 on keratinocytes is focused. Bcl-3 is a member of the IκB protein family. Although the other members of IκB protein family are localized to the cytoplasm, Bcl-3 is predominantly localized in the nucleus. IL-22 induces STAT3 phosphorylation and mediates psoriasis-related gene expression. Bcl-3 is induced by STAT3 activation and mediates gene expression. In keratinocytes, IL-22 increased Bcl-3, which was translocated to the nucleus with p50 via STAT3 activation. The increases by IL-22 were abolished by knockdown of Bcl-3. Moreover, the combination of IL-22 and IL-17A enhanced Bcl-3 production and IL-22-induced gene expression. The expression of these genes was also suppressed by the knockdown of Bcl-3. Bcl-3 overexpression induced gene expression. We also compared Bcl-3 expression between psoriatic skin lesions and normal skin. Immunostaining revealed strong signals for Bcl-3 and p50 in the nucleus of epidermal keratinocytes from psoriatic skin. The IL-22-STAT3-Bcl-3 is important pathway in the pathogenesis of psoriasis.

Lessons from the KSP

CURRICULUM VITAE

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KSP-1

One-Point Lesson about Topical Therapy for Psoriasis

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The majority of people with psoriasis have a mild to moderate case, which can often be effectively managed using topical treatments such as emollients, vitamin d derivatives, topical steroids, tar, dithranol, calcineurin inhibitors, and vitamin A derivatives.

We will discuss one-point lessons of topical agents for psoriasis in this section.

1. Fixed combination formula(Calcipotriol/betamethasone dipropionate)

Most people with mild-to-moderate psoriasis manage their disease with topical therapies. However, adherence to topical treatment remains a challenge, as the daily application creates a significant treatment burden. New topical therapeutic options need to offer higher efficacy and better patient acceptability, including easier application, to reduce treatment burden and enhance patient adherence.

Vitamin D receptor agonists (e.g., calcipotriol) and glucocorticoids (e.g., betamethasone diproprionate) have shown benefit in treating psoriasis. Glucocorticoids are known potent anti-inflammatory agents that block multiple anti-inflammatory pathways. Vitamin D receptor agonists appear to enhance the immunosuppressive activity of regulatory T-cells, driving T-cells toward a T helper 2 (Th2) profile while inhibiting Th1/Th17 cells. Calcipotriol has been shown to normalize the pro-inflammatory cytokine cascade in psoriasis, ultimately interrupting the pro-inflammatory feedback loop that drives disease pathogenesis. Recent data further supports the benefit of combining betamethasone with calcipotriol. The combination of the two agents showed additive effects, inhibiting the secretion of interleukin (IL)-17A and tumor necrosis factor (TNF)-α by dendritic cells and CD4+ and CD8+ T-cells, as well as reducing the inflammatory response of stimulated keratinocytes. This cellular data supports the enhanced clinical efficacy observed with the combination product, compared to the respective monotreatments in psoriasis patients

2. Topical treatment with moisturizer

There appears to be no real consensus on the timing of the application of emollients and topical steroids in conjunction with each other. But, emollients can help in a number of ways,

including reducing itching and scaling of the skin, making it feel more comfortable. There is also evidence that certain topical treatments work better on well-moisturised skin. Moisturizers should be allowed to absorb into the skin before the application of a therapeutic product. Namely, at least half an hour should be left between applying an emollient and another topical treatment.

Emollients were recognized as important, but no evidence-based guidance was provided to help the practitioner in the practical task of applying therapeutic topical agents. Therapeutic topical products should be applied to well-moisturized skin. The rationale is following : 1) there is some evidence to show that well-moisturized skin requires a reduced amount of steroid 2) there is some evidence to show that dithranol treatment is more effective following the use of emollients 3) applying an emollient on top of a steroid means that the steroid may be diluted and spread to areas of the body where it is not needed.

3. Maintenace and proactive treatment

In 2017, among Korean patients with psoriasis vulgaris, maintenance treatment with calcipotriol monohydrate/betamethasone dipropionate using a continuous daily regimen or an ‘as needed’ daily regimen provided similar efficacy, whereas a twice-weekly regimen was significantly less efficacious than either of these regimens.

In Asian consensus on assessment and management of mild to moderate plaque psoriasis with topical therapy, they mentioned that prevention of relapses is the goal of the maintenance phase and application of a topical steroid, vitamin D analog or a fixed dose combination of both twice a week or during weekends may help to achieve this goal.

The first proactive treatment in Japan showed that applying topical calcipotriol on seemingly healed psoriatic plaque lesions (pigmented/depigmented areas) suppresses recurrence better than applying it only on remaining plaques.

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KSP-2

One-Point Lesson from about The Systemic Agents for Psoriasis

PARK Hai-Jin

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Traditional systemic agents are a key part of the management for patients with moderate-to-severe psoriasis. Systemic therapy is commonly used in people with extensive (> 10%) stable plaque psoriasis where topical therapy and phototherapy are not appropriate or have failed. Also, a subset of patients with limited disease have debilitating symptoms can have some benefits from systemic therapy. The choice of treatment is influenced by several factors, including the effectiveness of a given medication, adverse effects, ease of administration and the age and sex of patients, etc.

Methotrexate is a first-line systemic therapy for psoriasis as it is highly efficacious for severe disease and all clinical variants of psoriasis. The contraindications of methotrexate include impaired kidney function, severe anemia, leukopenia and/or thrombocytopenia, significant liver function abnormalities, hepatitis (active and/or recent), excessive alcohol intake, significantly reduced pulmonary function, pregnancy or lactation. The most common side effects of methotrexate at the low doses used for psoriasis are nausea, diarrhea, fatigue, and headache. Supplementation with folic and/or folinic acid may either mitigate these adverse effects. For long-term monitoring of hepatotoxicity, noninvasive measurement of serum biomarkers, such as type III procollagen amino terminal propeptide, which is currently standard in most European countries. In some guidelines, liver biopsy may be recommended before methotrexate initiation in patients with hepatic disease risk factors, and when a cumulative dose of 3.5 to 4 g is reached according to American Academy of Dermatology (AAD) guidelines.

Ideally, cyclosporine should be used for short courses of several-month duration and alternated with other therapies. Intermittent short-term therapy (12~16 weeks) is the most frequently recommended regimen until significant improvement. Close assessment of renal function and blood pressure is essential. If serum creatinine increases 30% over the patient's baseline value on two consecutive measures, the dose should be reduced. Patients treated continuously for more than 2 years have a significantly higher risk of developing irreversible renal damage.

Acitretin as a single agent therapy appear to show limited efficacy in psoriasis vulgaris (PV). It provides better efficacy in pustular psoriasis (palmoplantar and generalized von Zumbusch type) than in psoriasis vulgaris. Side effects (teratogenicity, mucocutaneous effects, hepatotoxicity,

hyperlipidemia, and skeletal abnormalities) are seen in most patients receiving acitretin. But they usually disappear when the drug is reduced or withdrawn, except for hyperostosis. A major problem with acitretin is their teratogenicity, making contraception mandatory in women of childbearing age during treatment and for 3 years after discontinuing therapy.

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KSP-3

One-Point Lesson about Phototherapy for Psoriasis

CHOE Yong-Beom

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Phototherapy is a mainstay in the treatment of chronic plaque psoriasis. NBUVB has been found to be a comparatively effective and relatively safer alternative to PUVA in more than two decades of use in the management of psoriasis. As a result PUVA is not popular and replaced with NBUVB in most dermatologic clinics. Following is focused on NBUVB phototherapy in real clinical practice.

The optimum phototherapy regimen is to achieve a complete cure of disease with a minimum number of exposures, a low cumulative UV dose and with least possible acute as well as chronic side effects. What should be the initial dose of exposure, how frequently should a patient be exposed to phototherapy, what should be the percentage increase in the UV dose in every subsequent visit, what should be the maximum dose a patient should be subjected to and what if somebody develops adverse effects of NBUVB? Although answers to these riddles are still evolving over the years, these aspects of NBUVB phototherapy have largely been addressed.

We are well aware of the difference of erythema and pigmentary response after ultraviolet irradiation according to skin color and expect that optimal protocol is different depending on skin phototype. Unfortunately, these studies have been performed mainly on fair-skinned people. However, field experience for more than 15 years and some data on the skin reaction caused by ultraviolet radiation from dark skinned people, we could barely discuss optimal regimen for NBUVB phototherapy with dark skinned people.

The purpose of this talk is to provide some practical guidance to general dermatologists on the specifics of using phototherapy which remains one of our most safe and effective treatment strategies for psoriasis.

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KSP-4

One-Point Lesson about Biologics for Psoriasis

YOUN Sang Woong

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Biologics for psoriasis has been gradually increasing their usefulness in patients with moderate to severe psoriasis who does not respond to conventional psoriasis treatment. TNF-α blockers and IL-12/23 blockers have been major psoriasis biologics, and they have been used over and near 10 years, so they have a lot of data about the effectiveness and safety. Recently, IL-17 blockers and IL-23 blockers are emerging to manage moderate to severe psoriasis unresponsive even to TNF-α blockers and IL-12/23 blockers. Biologics for psoriasis are prescribed under very strict regulation of the government and safety issues. These new-comers are adding some new complex consideration for dermatologists who care severe psoriasis patients.

In this lecture, we gathered lots of questions about the considerations of biologics for psoriasis in special situations. The questions were classified into 3 categories. (1) How to select proper biologics for psoriasis? (2) Issues about the reactivation of latent tuberculosis (3) Long term adverse event: specially for the development of malignancy. Some of these questions are already answered finally, and others are still debating. I will make a brief and concise speech about the know-how of biologics use for psoriasis.

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The 22nd Annual Meeting of The Korean Society for Psoriasis

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